

Listing of Claims

1. (Currently Amended) A method for illuminating a target point in a real scene, comprising the steps of:

capturing a digital image of a scene;

identifying image coordinates of a target point in the digital image of the scene,

wherein identifying comprises:

displaying the digital image of the scene;

selecting a target point in the displayed digital image of the scene; and

determining image data coordinates corresponding to the selected

target point; and

projecting a light beam at a target point in the real scene, which corresponds to the selected target point in the displayed digital image, using the identified image coordinates.

2. (Previously Presented) The method of claim 1, wherein the step of projecting comprises the steps of:

converting the image coordinates of the target point to light coordinates for directing the light beam; and

processing the light coordinates to direct the light beam to the target point in the real scene.

3. (Original) The method of claim 1, wherein an integrated optical device is used for performing the steps of image capture and light projection.

4. (Original) The method of claim 1, wherein the step of projecting a light beam comprises projecting a laser beam.

5. (Previously Presented) The method of claim 1, wherein the step of capturing the digital image is performed using an omni-directional camera.

6. (Canceled)

7. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for illuminating a target point in a real scene, the method steps comprising:

capturing a digital image of a scene;

identifying image coordinates of a target point in the digital image of the scene,

wherein identifying comprises instructions for:

displaying the digital image of the scene;

receiving as input, image coordinates of a user-selected target

point in the displayed digital image of the scene; and

projecting a light beam at a target point in the real scene, which corresponds to the selected target point in the displayed digital image, using the identified image coordinates.

8. (Previously Presented) The program storage device of claim 7, wherein the instructions for projecting comprise instructions for performing the steps of:

converting the image coordinates of the target point to light coordinates for directing the light beam; and

processing the light coordinates to direct the light beam to the target point in the real scene.

9. (Canceled)

10. (Currently Amended) A system for illuminating a target point in a real scene, comprising:

an image capture device for capturing a digital image of a scene;

a display device for displaying the digital image of the scene;

a pointing device for selecting a target point in the displayed digital image;

an illumination device for projecting a beam of light at a target point in the scene that corresponds to a the selected target point in the displayed digital image; and a

data processing device comprising computer readable program code embodied therein for processing the digital image to identify image coordinates of the selected target point in the displayed digital image and generating control signals to control the illumination device to project the beam of light at the corresponding target point in the scene.

11. (Original) The system of claim 10, wherein the image capture device and the illumination device comprise common optical properties.

12. (Original) The system of claim 10, wherein the image capture device and the illumination device comprise an integrated device.

13. (Original) The system of claim 10, wherein the illumination device comprises a light-emitting plane.

14. (Previously Presented) The system of claim 13, wherein the data processing device comprises computer readable program code embodied therein for activating a point source in the light-emitting plane that corresponds to a projection of the target point in the scene on the light-emitting plane.

15. (Original) The system of claim 10, wherein the illumination device comprises a laser beam device.

16. (Previously Presented) The system of claim 15, wherein the laser beam device comprises:

- a laser beam generator;
- a deflector for deflecting the laser beam emitted from the laser beam generator;
- a plurality of motors, operatively connected to the deflector, for positioning the deflector to deflect the laser beam to the target point in the scene.

17. (Original) The system of claim 16, wherein the data processing device comprises computer readable program code embodied therein for generating control signals to control the plurality of motors to position the deflector at an appropriate angle.

18. (Original) The system of claim 10, wherein the image capture device comprises an omni-directional camera.

19. (Canceled)